GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:3014
ANSWERED ON:11.03.2003
SYSTEMIZING PADDY GENES
RATILAL KALIDAS VARMA

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Indian scientists have achieved success in systemizing genes of paddy (gene making);

(b) if so, the details thereof; and

(c) the percentage to which the production of paddy is likely to increase as a result thereof ?

Answer

INISTER OF STATE FOR SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT)

(a) & (b) : Yes Sir, Indian scientists from Indian Council of Agricultural Research and Delhi University have succeeded in complete sequencing or decoding of all the genes present on chromosome No.11 of paddy. Indian contribution is 15.38 Megabase against the commitment of 10 Megabase much ahead of time to the International Rice Genome Sequencing Programme.India joined the International programme in June 2000. Complete paddy genome has approximately 62,000 genes.Indian scientists have accomplished the identification of 2000 of these genes. Also our scientists have worked on identification of markers and gene characterization to make their use in breeding programme for increasing the yield.

(c) : At the present research stage, the exact increase in production can not be quantified. The paddy genome sequence is freely available in public domain for gene discovery and functional genomics. The focus is to improve the nutritional quality of paddy, and develop abiotic and biotic stress resistant varieties with increased yield.